

Michelin Americas Research Company
Attachment to Application for Experimental License
File No. 0570-EX-CN-2018

NARRATIVE STATEMENT

Pursuant to Section 5.61 of the Commission's rules, 47 C.F.R. §5.61, Michelin Americas Research Company ("Michelin") hereby requests an experimental license beginning September 1, 2018, – or as soon as possible – to perform a field evaluation of new product (automobile tires) that includes new pressure/temperature sensors paired with receivers for transferring data back to Michelin.

Michelin acknowledges its obligation under an experimental license to not cause harmful interference to and to accept harmful interference from, any station operating in accordance with the Table of Frequency Allocations of part 2 of the Commission's rules (47 CFR § 2.106). As shown below, the power level requested is extremely low and no harmful interference is expected to occur throughout the duration of the experiment. However, in the unlikely event that harmful interference does occur, Michelin will take steps to remedy such interference.

In support of this request, the following is shown:

- 1) Applicant's Name, Address, and FCC Registration Number ("FRN"):

Michelin Americas Research Company
515 Michelin Rd
Greenville SC, 29605

FRN: 0027583236

- 2) Description of Operation and Purpose of Test:

The test will be conducted on a taxi cab fleet that operates in the greater Las Vegas, Nevada, area. The purpose of the test is to evaluate the performance of a new Michelin tire structure (rubber compound) as well as the implementation of a new pressure/temperature sensor that will be adhered to the inside of the tire. The sensors – one located on each tire -- will communicate with in-car receivers that will report data back to Michelin engineers for post-processing.

The process is as follows: tires with installed sensors will be mounted to the wheels of the taxis. The assembly will then be mounted onto the vehicle, and finally the sensors within the tires will be paired with the receiver installed on the automobile to begin collecting data. The taxi fleet is to conduct normal operations in order to gather real world data.

3) Dates of Operation:

The test trials are scheduled to begin on or about September 1, 2018, and are expected to last for approximately 12-18 months. For flexibility, it is requested that the experimental license be issued for a full two year term, from September 1, 2018, until August 31, 2020.

5) Class(es) of Station(s):

Mobile. The radiating element is the in-tire sensor, which will transmit to the in-car receiver while the vehicle is in motion. The sensor to be used is a prototype design that is not yet approved pursuant to the FCC's equipment authorization program.

The in-car receiver/transmitter will send collected data back to Michelin using commercial wireless networks via SIM cards. The in-car transceiver used FCC certified modules to communicate over commercial networks and does not need experimental authority to operate.

6) Area of Proposed Operations:

120 kilometers radius centered around North 36° 8' 57" and West 115° 9' 42".

The center coordinate specifies the taxi cab depot, which is located at 1900 Industrial Rd, Las Vegas, NV 89102. The taxi cabs are licensed to do business in Nevada and are confined to that state. The majority of operations will be confined to the greater Las Vegas area but the proposed area of operation is extended to include locations in Lincoln and Nye counties that are occasionally frequented by the taxi cabs.

7) Equipment To Be Used:

Equipment is experimental:

Sensor:

Manufacturer: Sensata

Model: "Tire Mounted Sensor Prototype"

Number of units: 500

The experiment will involve a maximum of 120 vehicles, or 480 tires. A small buffer is included to account for potential product failures.

8) Frequencies Desired:

The Sensor will transmit on the center of 433.92 MHz. The necessary bandwidth for the telemetry transmission is 50 kilohertz.

9) Power Levels:

The ERP for the Sensor is rated at approximately 2 microwatts ERP. The application seeks authority to operate up to 10 microwatts ERP.

10) Type of Emission, Modulation Technique, and Bandwidth Required:

Modulation type is FSK with a transmission rate of 19.2 kbit/s. The specified emission designator is therefore 50k0F1D

11) Overall Height of Antenna(s) Above Ground/Orientation:

Each sensor incorporates an omnidirectional antenna located on each tire of the vehicle. The maximum height above the ground is no more than 1 meter.

12) Contact Information

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Mr. Gaylo will serve as the emergency contact in the unlikely event of reported interference caused by this experiment.

Should you have any questions or need further information regarding this submission, please contact Mr. Gaylo or Michael Lewis of DLA Piper LLP. Mr. Lewis can be reached at 202-306-6679 or michael.a.lewis@dlapiper.com.